

Maryland Department of Information Technology

# Configuring the MD iMAP Template for Developers

Geographic Information Office



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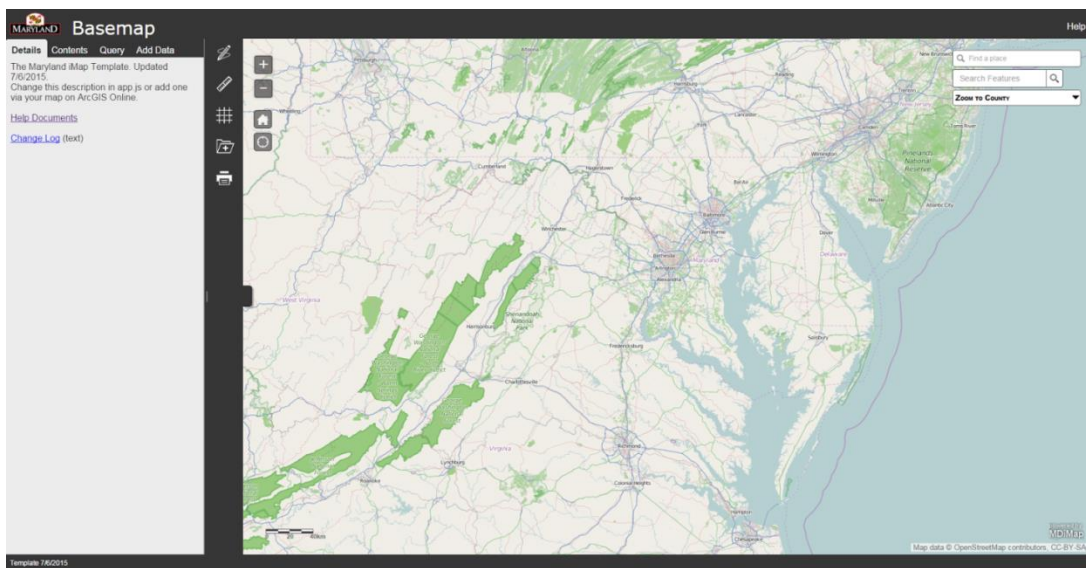
# Introduction

## About this Document

This document is aimed at users who have JavaScript development experience and want to fully customize and deploy the MD iMAP Template on their own web servers. This document explains how to deploy the MD iMAP Template code and explores key parts of the code in order to configure Template in your own environment.

## What is the MD iMAP Template?

The MD iMAP Template is a JavaScript based application that allows users to have a consistent look and feel for their web mapping applications. The MD iMAP Template provides additional tools and layout options that can be easily configured to enhance the web mapping application experience over typical templates. This template is not a native mobile application but has responsive design to work with browsers on mobile devices.



## How do I use the MD iMAP Template?

The MD iMAP Template can be deployed two ways:

1. As a hosted application in Maryland's ArcGIS Online Organization
2. As a standalone application on your own web server

This document covers the deploying the MD iMAP Template as a standalone application.

Please see the following documents to learn about deploying the MD iMAP Template:

[Configuring the MD iMAP Template in ArcGIS Online](#)

[Configuring the MD iMAP Template for Developers](#)

## Getting Started

### Deployment Checklist

You will need the following to deploy the MD iMAP Template in your own environment

- ☐ Microsoft Operating System: Windows Server 2008 or higher
- ☐ Web Server (e.g – Microsoft IIS)
- ☐ Archiving/Compression Software (e.g. – 7z, WinZip)
- ☐ Text Editor or Integrated Development Environment (e.g. – Notepad++, SublimeText, Aptana, Eclipse)
- ☐ Web Browser: The latest version of Google Chrome, Mozilla Firefox or Microsoft Internet Explorer  
***Some tools may not function correctly in Internet Explorer 8 or 9***
- ☐ MD iMAP Template Code

### Download the MD iMAP Template Code

Go to the Maryland Geographic Information Office GitHub site: <https://github.com/mdgio>

- Click on “imap” (<https://github.com/mdgio/iMap>) and click the “Download Zip” button
- Click on “xstyles” (<https://github.com/mdgio/xstyle>) and click the “Download Zip” button

### Unpack and Deploy the Template Code

- Unzip the “imap” package to your main web server directory (e.g. – “C:\inetpub\wwwroot” for Microsoft IIS)
- Unzip the “xstyle” contents to: `imap\basicviewer\src\libs\xstyle`

# Configuring the Template

## Overview

The MD iMAP Template primarily uses three files that control the most of the configuration of the template.

- App.js
- Webmap.js
- AddLayers.js

## Developer Notes

- The MD iMAP Template uses Esri's JavaScript API (version 3.13) and the Dojo Framework (version 1.10.4)
- When downloading the Template code from GitHub, ensure that you download and install "xstyles" to the proper location or the code will not work.
- The line numbers of the code below may shift up or down based on changes you make to the code on your own
- Text variables need to be inside of quotation marks
- True/False variables do not need be inside of quotation marks
- Do not eliminate any commas
- Comments have been added to the code where applicable for additional configuration notes

## App.js

This file controls whether a tool, widget or feature is turned on or off. Most of these options are controlled with a "true" or "false" variable. Some options are modified with text values as well.

Location: imap\basicviewer\src\modules\core\configuration

GitHub View:

<https://github.com/mdgio/iMap/blob/master/basicviewer/src/modules/core/configuration/app.js>

Below are the main parameters, shown in line order, which can be changed. These all appear after "var ConfigOptions" on line 10.

Framework		
Item	Line	Value(s)
appid	14	Placement for an appid for ArcGIS Online (AGOL) created mapping application. Do not confuse with “webmap” id. Alternatively, you can add an appid via the URL similarly to adding a webmap id via appending ?appid=<id number>
webmap	18	Add the webmap id here. Keep empty quotes if you don’t want to use a webmap id
webmapurl	22	Contains “webmap.js” by default. This is where enable you to call upon a referenced REST service established in webmap.js. Both appid and webmap will have to be empty and represented like “”.
description	25	Putting text here will over-ride the description provided in a webmap. If a webmap has no description, then this is the place to add one if you desire. The description will show in the Details tab
owner	27	The owner of the app—used by the Print option. It defaults to the one provided in an AGOL webmap when the quotes are empty.
theme	39	The choices are one of these: imap, gray, blue, purple, green, orange and each call upon specific CSS files in the CSS folder. “imap” (black) is provided by default. Additional themes can be created provided they are created similarly to the files found in the CSS folder.
displaytitle	41	Boolean, default: true. Allows for display of a title in the header portion of the iMAP template
title	43	Defaults to the AGOL webmap title when left with empty quotes. Putting a title here will over-ride the AGOL title.
titlelogoUrl	45	Allows and specifies a logo graphic to be used in the header. Put your own graphic in the “assets” folder and refer to it here in titlelogoUrl “assets/my_graphic.png”
customlogo	51	The semi-transparent image in the lower right of the map. If you want to change the “Powered by ESRI” or “Powered by iMap” logo, assign the image to one in “assets” and provide a hyperlink in “link”, if desired.
headerheight	63	Adjust the height of the header. It is currently set to “40”.

link1, link2	68	If you need more links, add the hyperlink and accompanying text here; The help link is default for the first link, however this can be adjusted as desired.
<b>Left Pane Adjustments</b>		
disableLeftPane	57	This turns off the left hand pane completely. This overrides leftpanewidth (below)
leftpanewidth	59	Set the default/opening width of the left hand information pane.
startupwidget	85	Default is set to “displaydetails”. This code establishes which of the tabs will be opened upon the initial load of the iMap template. Choices are: displaydetails, tablecontents, query, adddata or none.
displaydetails	88	Default is set to true. Enables the display and use of the <b>Details tab</b> , which in turn, provides the details of a web map (if provided).
tablecontents	90	Default is set to true. Enables the display and use of the <b>Contents tab</b> which contains the maps’ table of contents, the ability to turn on/off layers, move layers, and adjust layer transparency. By default, if simpleLegend and layerList are false, this will only show the layerList as the Legend.
simpleLegend	92	Hides or shows the simpleLegend
layerList	94	Hides or shows the advanced legend (if simpleLegend = false, this pane will be titled Legend)
displayQuery	96	Hides or shows the query panel in the left pane.
adddata	82	Default is set to true. Enables the display and use of the <b>Add Data tab</b> which contains accessible MD iMAP REST services that can be added to the map in addition to the main operational layer(s) of the map.
displayeditor	83	Default is set to false. <i><b>This tool is still in development.</b></i>
<b>Tools</b>		
displaytimeslider	108	<i>Default is set to false. This tool is still in development.</i>
displayprint	110	Turns on/off the print tool from the button bar. By default, it’s set to true if not on a touch device.



printtask	112	The URL of the GPService/Export Web Map Task that you wish to use. The default is from MD iMap.
printlayouts	114	<b>RETIRED:</b> The print tool now uses any available layout and format available from the printtask specified above
displaybasemaps	131	Default set to true. Enables the display and use of the Basemaps button/selection.
displaybookmarks	132	<i>Default is set to false. <b>This tool is still in development.</b></i>
displaydraw	133	Default set to true. Enables the display and use of the Drawing button/tools.
displayinterop	134	Default set to true. Enables the display and use of the Data Interoperability button/tool.
displaymeasure	135	Default set to true. Enables the display and use of the Measuring button/tools.
displayshare	136	<i>Default is set to false. <b>This tool is still in development.</b></i>
<b>Map Controls</b>		
displaysearch	147	Default set to true. Enables the display and use of the Search area/tool.
showFeatureSearch	148	Default set to false. Show/hide the search for features tool in the upper right. Best practice is to only set either the displaysearch or the showFeatureSearch to true, depending on your user group.
zoomtounty	149	Default is set to true. This code enables the “Zoom to County” tool, an enhanced “select by feature” ability and acts as a dynamic bookmarking tool. If you are code savvy, you can re-design it to zoom to another feature by making adjustments to toolmanager.js in the zoomtounty section around line 104.
displaylocation	151	Default set to true. Enables the display and use of the Location button/tools.
displayscalebar	152	Default set to true. Enables the display and use of the Scale Bar as found in the lower left-hand corner of the map.

displayoverviewmap	153	Default set to true. Enables the display and use of the Overview map button/tool. The Overview map is found in the lower right corner of the map.
displayslider	155	Default set to true. Enables the display and use of the Zoom buttons/tools.
displayhome	157	Default set to true. Enables the display and use of the Home button/tool.
<b>General Settings</b>		
bingmapskey	163	If the webmap uses Bing Maps data, you will need to provide your Bing Maps Key here
basemapsgroup	171	Default is set to the MD iMAP AGOL basemap group. Specify a group in ArcGIS.com that contains the basemaps to display in the basemap gallery. Example: title:'ArcGIS Online Basemaps' , 'owner:esri'
geometryserviceurl	178	Place for the URL of a geometry service to use. Default service is from MD iMAP
placefinder	185	Place for the URL of a geocoder service to use. Default service is the MD Composite Locator
displaypointtransp	191	This turns off the transparency slider for point features

## Webmap.js

Use this file to consume ArcGIS Server REST services inside of the Template instead of an ArcGIS Online Webmap.

Location: imap\basicviewer

GitHub View: <https://github.com/mdgio/iMap/blob/master/basicviewer/webmap.js>

To use the webmap.js file, leave the **appid** and **webmap** parameters in the **app.js** file as empty strings ("" ) and then point the **webmapurl** parameter to **webmap.js**

The webmap.js file is located within the “**basicviewer**” directory. The webmap.js file is JSON (JavaScript Object Notation), a data interchange format (See <http://www.json.org> for more information)

Additional information on how to format the webmap json can be found at:

<http://resources.arcgis.com/en/help/arcgis-web-map-json>

[https://developers.arcgis.com/javascript/jshelp/intro\\_webmap.html](https://developers.arcgis.com/javascript/jshelp/intro_webmap.html)

The JSON contains main divisions for several items, they are as follows:

- Item Information
  - Map GUID
  - Title
  - Snippet
  - Extent
- itemData
  - Operation Layers
    - Popups
    - Bookmarks

You can view the the JSON of your webmaps in order to help you construct webmap.js through the following Esri tool:

<http://ago-assistant.esri.com>

## AddLayers.js

Use this file to define the layers you want to populate the Add Data tab in the left pane. The AddLayers.js file is within the “**basicviewer**” directory.

Location: imap\basicviewer

GitHub View: <https://github.com/mdgio/iMap/blog/master/basicviewer/AddLayers.js>

Use the AGStoJSON Python Script (sibling to the basicviewer folder) to crawl your ArcGIS Server REST directory and output a JSON object. This file can also be edited manually. Services can be from any ArcGIS Server REST endpoint, however, only Map, Image, Feature Layer and WMS services are currently supported. KML can be added but is not fully supported within the legend widget.

The AGStoJSON Python Script requires an administrator login to ArcGIS Server that host the services you want to create the JSON object for AddLayers.js. The Add Data tool is not dynamic, meaning that each time you want to refresh the Add Data tools’ available layers or directory structure; you will have to rerun the AGStoJSON Python Script and replace the contents of the AddLayers.js file.

## GitHub

The Maryland Department of Information Technology, Geographic Information Office, maintains all version of the MD iMAP Template code at <https://www.github.com/mdgio>

We appreciate your interest in using the MD iMAP Template and we are interested in hearing feedback from developers on the Template. If you have discovered application bugs, have suggestions for new features, or have made enhancements to the template, we encourage you to share this back with our developers through GitHub.

## Additional Resources

### General Information

Find more information and documentation about the MD iMAP Template at:

<http://imap.maryland.gov/Pages/template.aspx>

Or

Contact the Maryland Geographic Information Office at: [gio.doit@maryland.gov](mailto:gio.doit@maryland.gov)

### Development Resources

You can find the source code for all versions of the MD iMAP Template at:

<http://www.github.com/mdgio>

More information about Esri's JavaScript API is available from: <http://js.arcgis.com>

More information about the Dojo Framework is available from: <http://www.dojotoolkit.org>